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Introducing Speck. The New Home Air Quality Monitor

This year's SXSW Interactive Festival in Austin, Texas saw the introduction of a hi-tech new gizmo which could significantly improve the quality of air in our homes. The product is called Speck and was developed by Professor Illah Nourbakhsh in his Create Lab in Pittsburgh, Pennsylvania, USA.

The device works with the help of machine-learning algorithms, allowing it to analyse the harmful particles in the air indoors more thoroughly than existing products. The algorithms make it more sophisticated in determining and compensating for interference noise in its sensors, thus meaning it can offer more detailed data on the exact amount of harmful particulates in the atmosphere.

Inter-connected

Furthermore, the device is enabled with Wi-Fi, allowing it to upload the data to an online database which can be easily accessed and managed remotely by the user. It is also compatible with other monitoring systems of its type, such as Jawbone.

The ability to log data can reveal historical patterns which create more particulates in your home, demonstrating which particular activities (such as cooking or cleaning, for example) can reduce the quality of the air. This will then enable the user to take appropriate action to purify the air, such as altering their habits, opening windows more frequently or using air filters.

Meanwhile, the database also comes with the ability to cross-reference the information against federal standards and monitoring stations. Plus, information about the air quality in any region can be monitored remotely by members of the public. Indeed, such open source environmentalism has become increasingly popular over the last few years, with the launch of the AirBeam air monitoring product asking the question, Should All Environmental Technology Be Open Source?

Already in Use

The Speck unit is already available to purchase for US\$200 (roughly £130) and has been made available to loan from libraries and in public schools and citizen groups – the Heinz Endowments and Pittsburgh Foundation recently acquired 1,000 of the devices specifically for the purpose.

Meanwhile, another use of the product could be in the realm of industrial manufacturing and construction. On construction sites and in industrial plants, the Indoor Air Quality (IAQ) is often overlooked. This can lead to serious respiratory ailments for the employees who work onsite day-in, day-out.

Back in 2010, Gareth Wyn Evans posited the idea of wireless monitoring to ensure a safe indoor environment. Now, with the help of Speck, this idea could be coming to fruition. Meanwhile, the device is also being used to investigate the possible harmful effects of natural gas drilling. 115 units have been bought by the Southwest Pennsylvania Environmental Health Project to look into complaints made by residents in the surrounding area of the drill site. By having the units in place for between one and three months, the Project will be able to learn how the drilling process affects the quality of the air.

Image Source: Speck