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**CMU, Airviz Will Make Air Quality Monitors
Available at Public Libraries Nationwide**
Sensor Data Gives People Power To Improve Air They Breathe

PITTSBURGH—Learning about the quality of the air you breathe should be as easy and inexpensive as borrowing a book from a library, and that's why Carnegie Mellon University researchers plan to provide free Speck air quality monitors to 100 public libraries nationwide.

The Speck sensors, which detect particulate air pollution in the home, already have been used by hundreds of patrons of Carnegie Library of Pittsburgh. CMU's CREATE Lab, which developed Speck, and spinoff company Airviz, which makes and markets the device, are now offering three free Specks, informational materials and training to public libraries that agree to make them available to their patrons.

"We have too many communities where the air is hazardous from time to time, yet people can't readily find out what they are breathing in their own homes," said Illah Nourbakhsh, professor of robotics and head of the CREATE Lab, which develops innovative robotic technologies for the public good. "This is the air quality you can actually do something about – if you know that a hazard even exists. That's why it is so important that people of all income levels have access to a sensor such as Speck."

Interested libraries can apply for the National Speck Library Program at specksensor.com/libraries/apply. In addition to three free Specks, participating libraries also receive a 15 percent discount on purchases of additional Specks. Carnegie Library of Pittsburgh, which loans Specks through 16 of its 19 branches, is providing advice and support for the national campaign.

"Libraries are creating a culture of learning that extends far beyond books," said Toby Greenwalt, the library's director of digital strategy and technology integration. "By making Specks

available in the library we are helping to start a conversation around how to use data to make better decisions and be informed about home environmental health. Since introducing them to the public last year, we have seen an increasing demand for Speck technology."   "We also want to build a community of local experts who can work with their neighbors and the libraries to use Speck," said Bea Dias, project director for the CREATE Lab. People selected for the Speck Air Quality Advocate Program will receive a free Speck and training in return for providing 10-20 hours of service annually. Individuals can apply at specksensor.com/advocates/apply.

The CREATE Lab and Airviz introduced the Speck personal air quality monitor a year ago at the SXSW Interactive Festival in Austin, Texas. To keep the monitors affordable – they retail at $149 – Speck uses a low-cost infrared sensor to detect pollutants. Though such sensors tend to be imprecise, the CREATE Lab developers employed machine learning algorithms that learn to recognize and compensate for spurious "noise" in each detector, boosting accuracy.

Speck is designed for use indoors, helping users realize when polluted outside air is coming into the house, or to recognize pollution sources within the home. It also is Wi-Fi-connected, so air quality data can be uploaded for analysis and shared, if desired, via the Internet.

Speck was placed in the Pittsburgh library branches with support from the Heinz Endowments, Fine Foundation and Pittsburgh Foundation. The national library campaign thus far is being supported by CREATE Lab and Airviz in a bid to "pay it forward," Dias said.

"Providing equitable access to monitoring technology is too important for us not to do this," Nourbakhsh said.

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