

BeBop Sensors to offer sensor expertise to wearables

October 28 2014, by Nancy Owano



Keith McMillen has been an innovator in audio and music technology for nearly 30 years. His bio notes tell us that "He has been working his entire adult life on one single problem —how to [play](#) live interactive music in an ensemble using extended instruments moderated by computer intelligence." Keith McMillen Instruments, the California-based company, said on its company site that "We believe when a computer is played as a musical instrument it should feel and respond like one, with all the nuance and sensitivity that makes an instrument

musical."

That at least helps to explain in what manner he and his company, Keith McMillen Instruments (KMI), is getting into the business of wearable technologies, with the motto, "MakeThings Knowable." On Monday, BeBop Sensors was launched. This new undertaking, founded by McMillen, is to offer sensor expertise to the wearables market. After six years of developing smart fabric sensors for his musical instrument company, McMillen said that "We were approached by so many [companies](#) who needed real solutions that we started BeBop to provide proven wearable sensor technology to OEMs." BeBop seemed like a natural step for KMI, he said, "where we have diligently tuned fabrics, geometries, and production processes allowing us to ship over 1 million sensors to some of the most demanding musicians in the world." The press release further stated that "BeBop sensor technology was created after six years of developing smart fabric sensors for more expressive musical instruments, such as KMI's popular QuNexus and QuNeo keyboards."

Berkeley, California-based BeBop Sensors has a proprietary "Monolithic Fabric Sensor Technology" that integrates all of the sensors, traces and electronics into a single piece of fabric. BeBop Sensors also announced Monday their first product, the BeBop Wearable Smart Fabric Sensor, which measures "all aspects of physicality," including bend, location, motion, rotation, angle, and torque. BeBop technology senses and displays 3D maps of pressure, bend, location, rotation, angle, and torsion. Promotional copy noted that, where things or people interact, BeBop sensors comprehend force, location, size, weight, shape, motion and presence across any size, resolution and geometry.

The company's solutions, available for integration into wearable products, include wearable controllers for sleeves of jackets or shirts to connect to smartphones to answer calls, adjust volume or select songs, all

while the smartphone remains in the user's pocket; shoe insoles that measure gait, pressure, contact style, fit, and flexure of toes and feet; planar, spherical or cylindrical geometries used as pressure maps; yoga and gym mats that show hand and foot pressure for teaching; weight-lifting gloves that indicate weight and even load; and more.



"All [musical instruments](#) are essentially [sensors](#) with forms of [acoustic](#) processing attached," said McMillen. "The same care and creativity used to build our instruments will serve well for our non-musical customers as we expand into the wearables market."

More information: www.bebopsensors.com/

Citation: BeBop Sensors to offer sensor expertise to wearables (2014, October 28) retrieved 17 April 2024 from <https://techxplore.com/news/2014-10-bebop-sensors-sensor-expertise-wearables.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.