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# *Infrared Imaging News*

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## **Microcantilever Technology Springs Back to Life**

Almost two years after the investors in **Sarcon Microsystems** pulled the plug, uncooled microcantilever technology is again attracting attention.

**Multispectral Imaging Inc. (MII)**, Newark, New Jersey, has just negotiated an exclusive worldwide license with **Oak Ridge National Laboratory (ORNL)** for its patents involving the use of microcantilever sensors for infrared imaging. The company has also closed a first round of private financing with participation from **Rho Ventures, SAS Investors** and **The Spencer Trask Private Equity Funds**.

**MII's** management team includes Matt Miller, CEO, the former CEO of Next Wave Communications; and Scott Hunter, the former CTO at **Sarcon**.

It should be noted that despite its name, **MII** does not intend to develop a "multispectral" sensor.

The company was originally founded in October 2003 and initially sought to develop an optical readout technology but has recently decided to make use of an electrical readout.

The uncooled microcantilever FPA being developed is based on lessons learned in previous attempts at the technology. However, the basic approach is the same: Coat the microcantilevers with a bimaterial. The absorption of infrared radiation causes a rise in temperature at each pixel which causes the bimaterial to bend the cantilever. The resulting change in capacitance is measured by a readout IC.

The main advantage of the microcantilever approach is that the temperature responsivity (as measured by the percent change in signal per degree) is approximately ten times as large as for VOx

microbolometers (i.e. 20 – 50%/°C compared to 2 - 4%/°C).

[Editor's notes: Considerable work on microcantilever imagers was done at both **ORNL** and **Sarnoff Corp.** (Princeton, New Jersey). As a result, Sarcon had exclusive licensing agreements with both organizations. However, progress on the **Sarcon** FPA was taking too long when investors decided to pull the plug on the company in 2003.

Apparently, **MII** feels that the technology it is developing does not require licensing from **Sarnoff**.

At the same time it is believed that **Sarnoff** is separately licensing its technology to another start-up.]