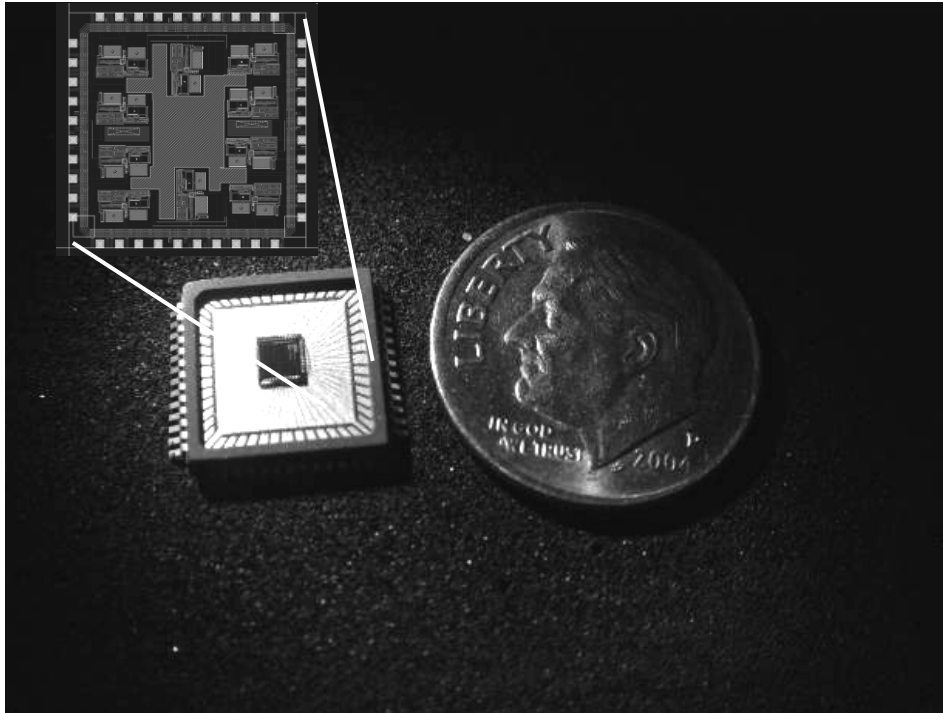


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**Here is one picture of something that can save the lives of 7 yr. old girls and 20 yr. veteran police officers. Have we got your attention? OK.**



Now the next couple of charts are from some federal (national) lab test results. They are real.

What these show is that in matters of seconds, our detection technology can detect certain kinds of explosives. Timing is critical at every point in the prevention and interdiction cycle. A matter of seconds can be a matter of dozens or hundreds of lives.

But there is also the Cost.

Unlike some of the large defense contractors, or certain firms that have strong “connections,” the cost of the explosives sensor we have been developing is at least an order of magnitude lower. We may be able to deliver sensors for schools and public/personal use that are less than \$50/unit and they can be attached to a simple cell phone.

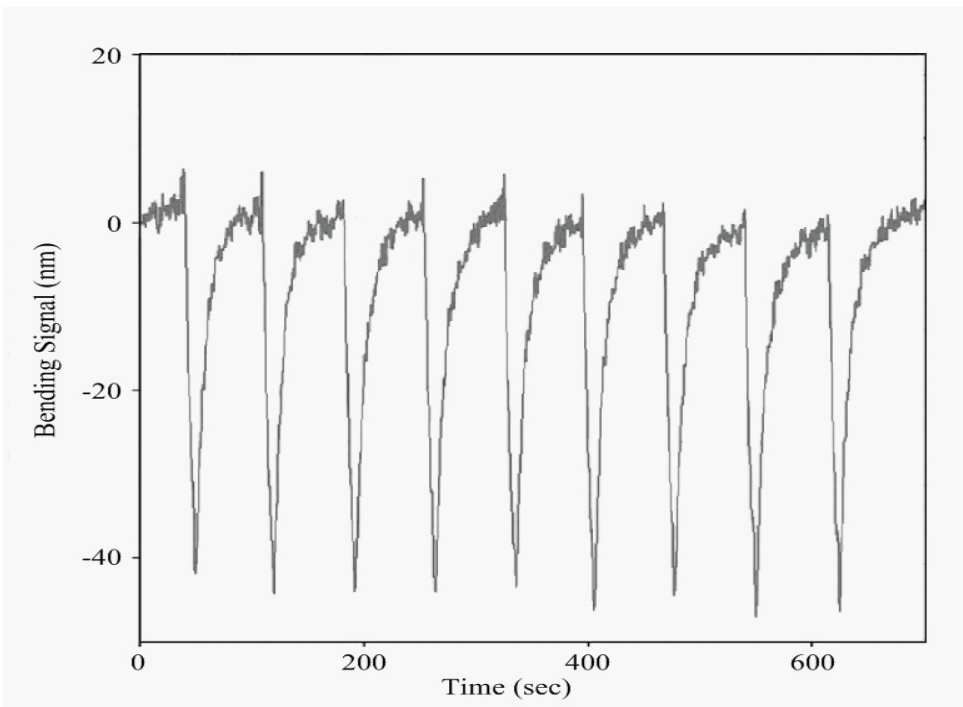


Figure 3. temporal response of a 4-MBA coated cantilever to periodic exposure to PETN vapor

PETN is in many C4-type plastic explosives. Most detectors have false positives and also miss completely because these explosives do not release as many tracer molecules as for instance TNT.

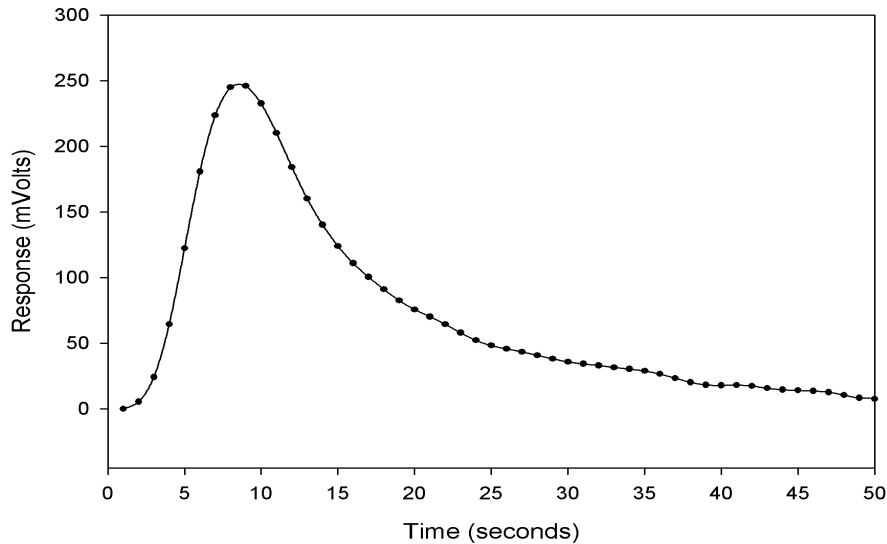


Figure 4. Response of a piezoresistive cantilever due to exposure to RDX  
 RDX is another explosive that has been and can be used by terrorists or wanna-bes. Note the detection in less than 10 seconds.

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Timing is everything.

Finally, two scenarios for the imaginative and practical-minded.

### **1. AnySchool, USA**

Case # 1

TETRAD sensors in multiple, discrete locations including entryways. Perpetrator brings in explosives or a set of ingredients for a liquid explosive bomb. No guns, no metal parts. Any metal detectors in use will detect nothing.

The TETRAD sensor will pick it up and immediately notice police, in all probability long before the perpetrator has had time to begin deployment or a terrorist action.

Cost: the price of installing the system

Case # 2

No TETRAD sensors.

Perpetrator carries out actions.

We've seen the consequences many times over. Too many funerals.

Cost: more than mere \$\$\$

### **2. Roadside traffic stop**

Case #1

TETRAD sensor worn on the belt. Officer has some suspicions. Suspect is outside the vehicle. Sensor is placed inside the car or the trunk. 5 seconds later an indicator sounds off the presence of a suspicious substance. The alert is simultaneously sent to headquarters/dispatch for a possible incident requiring backup assistance. Suspect is apprehended, officer goes home to his family.

Case #2

I think everyone in law enforcement knows what can happen in the event of concealed weapons. This problem can be reduced very effectively with something that in quantity will be less than \$50/unit.

Figures 1 – 4 below illustrate samples of the devices that we can use with our sensors for easy-to-use systems to be used by police, fire, hazmat, and even in schools and other public institutions.

Costs are at an order of magnitude LESS than those from SAIC, General Dynamics, Smiths, Lockheed-Martin, L3, ARA, ICX, and these actually work.



Fig. 1 – Multi-sensor All-Terrain Rover



Fig. 2 – All-Terrain Multi-Sensor Snake Robot



Fig. 3 – Sensor Carrier UAVs

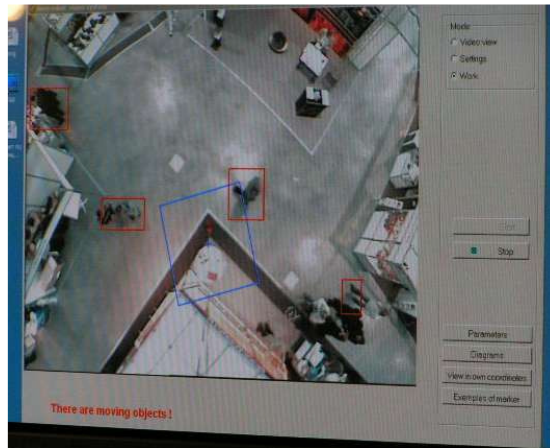


Fig. 4 – Tracking and Correlation Software

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