

# Ka-Boom!!! Retired mass-transit bus bombed to smithereens to test forensics camera

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Ruggedized, self-contained cameras, similar in concept to the black box used in aircraft, would record video data that could be retrieved by investigators following a catastrophic incident.

*Lights, [Camera](#), Ka-Boom!*

Cheap, lightweight cameras could help protect mass transit, but would they survive a big costly blast?

That was the question on the minds of Department of [Homeland Security](#) Science and Technology Directorate (S&T) scientists and managers watching from behind three feet of reinforced concrete.

"30 seconds..." came the countdown voice in an adjacent room.

Outside was an old public bus, rigged with explosives; a series of baseball-sized video cameras mounted to its walls. Could the images on their [memory chips](#) be salvaged by computer engineers? Would they be clear enough to identify the bomber? In this case, of course, the latter question wasn't much of a mystery.

At the Aberdeen Proving Ground in Maryland, every Army vehicle with wheels or tracks had been tested since World War II, and that's where S&T's Homeland Security Advanced Research Projects Agency (HSARPA) was to witness the test bombing.

S&T's Stephen Dennis explains the idea: DHS wants to develop cameras with memory chips sturdy enough to withstand bombing attacks, fires or floods, but inexpensive enough to use in places where a complete surveillance system wasn't workable.

DHS's target price for the cameras was between \$150 and \$200 a piece, he said.

"These cameras would be used as a means of forensic analysis," said Dennis. They would not transmit or collect personal information, and would be tamper-proof to prevent someone from ripping one off a wall and, say, posting the images on YouTube. Video from the cameras would be recovered and used by law enforcement only after an incident.

Inside the shelter, the scientists watched a wall of flat screens hooked up to high-speed cameras that ringed the bombing range outside. This was just one test with one bus, representing just one kind of dangerous threat.

"The idea is that the cameras are robust enough to survive the blast from a suicide bomber," said Dennis.

There had been some talk about what kind of damage the explosive representing this suicide bomber could do. Would it pop the ceiling open like a tin can? Would it split the bus in half?

*"3, 2, 1! Boom!!"*

Even behind a giant steel plate, the walls of the shelter shuddered. The screens flashed red, and filled with smoky plumes.

Once the smoke cleared and flying debris settled, the group watched workmen as they plugged the ground with colored flags wherever they

spotted one of the small cameras. A metal strip from the bus's shell lay across tree branches a hundred yards away.

"There wasn't much left of the bus except the wheels and chassis. But the cameras survived, and that was the point."

Did the cameras' memory chips survive the blast intact? Fourteen out of 16 did. In our next newsnote, analysis of those survivors will be described.

Source: US Department of Homeland Security

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