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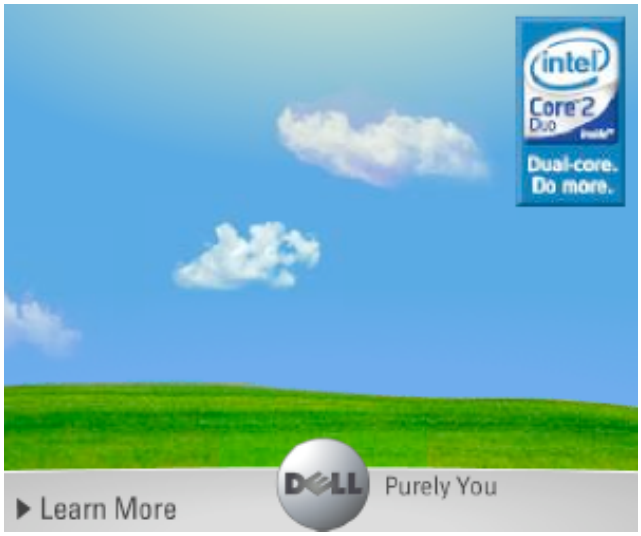
# Homeland Security researcher laments 'PlayStation generation'

**Patrick Thibodeau**

**March 02, 2007** (Computerworld) WASHINGTON - Jay Cohen, who heads science and technology research at the U.S. Department of Homeland Security (DHS), has an $850 million research budget this year for developing what he sometimes calls "wow" technology. But his enthusiasm for the possibilities of science is tempered by his worry about whether the U.S. is producing the talent needed to further the research necessary for national security.

There's "a crisis in this country," said Cohen, which he described as a "PlayStation generation" of students who want immediate gratification and avoid math and science because it's too hard.

That was just one of the points that Cohen, a former U.S. Navy admiral who is now undersecretary for the science and technology directorate at DHS, made at a conference today held by the Armed Forces Communications and Electronics Association. The event was attended by many of the technology firms that develop systems used in homeland security.




Cohen's point about the need for students with an interest in science is underscored by some of the research on which the agency is now working. "I get to take risks with millions of dollars to prevent putting billions of dollars in acquisitions at risk," said Cohen.

DHS will fund research projects that private industry isn't likely to touch. U.S. companies are usually less focused on applied research than on being first to market, said Cohen. Some businesses are even "turning away from patents" to focus on developing products. "Why beat your head against the wall with a patent when someone else is going to have a variation of your technology and get it out there?" he said.

"Failure is not a bad thing in science and technology," said Cohen, pointing to the risky projects his agency funds. DHS calls those efforts "high-impact technology solutions [that] are expected to fail because they are high risk. But if they succeed, wow, they are game changers."

One area of basic research under way at DHS involves improving the technology used by CTX machines, which screen baggage at airports. The goal is improve the algorithms that process sensor data in an attempt to improve recognition and differential in what the machines scan.

Another is project Chloe, which involves drones that fly over airports at altitudes as high as 65,000 feet in an effort to spot the thermal signature of a missile and take measures -- such as firing lasers -- to destroy it.

While emerging technologies get much attention among homeland security officials, isn't always better.

In another area, communications, David Boyd, director of command and control systems at DHS, said analog communications may be better than digital in some cases. Digital, Boyd said, requires a "high degree of fidelity" -- if the signal isn't strong enough, digital may not work. Analog, however, can be more forgiving and may be best suited for some uses. "You have to think about what you are trying to do," he said.