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SRNL is a DOE National Laboratory
operated by Savannah River Nuclear Solutions.

TechBriefs

Savannah River National Laboratory

U.S. DEPARTMENT OF ENERGY • SAVANNAH RIVER SITE • AIKEN • SC

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At a glance

- Portable
- Easily used by one person
- Detects gamma and neutron radiation
- Quickly covers large area
- U.S. Patent 7,351,982

Contact Information

Partnering Opportunities

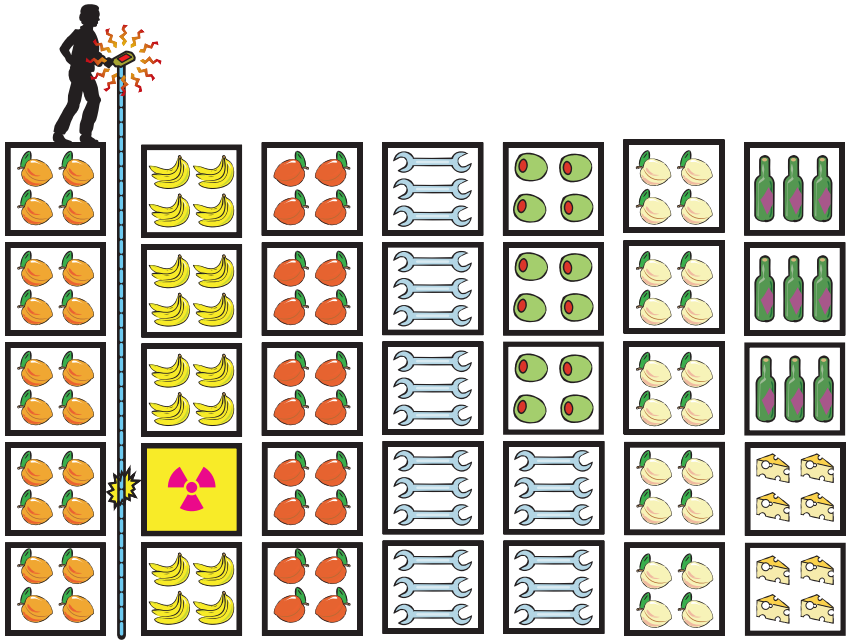
E-mail: partnerships@srnl.doe.gov

RadRope™: Portable Nuclear Material Detection System

Background

This lightweight, portable system can rapidly detect the presence of nuclear materials in sealed containers without the use of harmful x-rays. Using sensors arrayed linearly and encased in fabric, the RadRope™ system can be dangled in the 2- to 4-inch gap between stacked shipping containers on a cargo ship by a customs inspector. As the inspector walks along the top containers, a hand-held PDA shows an alarm when any sensor in the array detects radiation levels above background radiation.

The RadRope™ system has been beta-tested for the U.S. Coast Guard on ships entering port in Charleston, S.C.



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Technology transfer

The Savannah River National Laboratory (SRNL) is the U.S. Department of Energy's (DOE) applied research and development laboratory at the Savannah River Site (SRS).

With its wide spectrum and expertise in areas such as homeland security, hydrogen technology, materials, sensors, and environmental science, SRNL's cutting edge technology delivers high dividends to its customers.

The management and operating contractor for SRNL is Battelle Savannah River Alliance, LLC. BSRA is responsible for transferring its technologies to the private sector so that these technologies may have the collateral benefit of enhancing U.S. economic competitiveness.

Simple design

Geiger Muller tubes comprise the sensor nodes. Many independently operated sensor nodes can be strung together in any length. Analog-to-digital converters attached to each sensor send data to the PDA, or to a CPU. A user interface receives and displays the data. The Geiger Muller tubes can be configured to detect both gamma and neutron radiation.

Partnering opportunities

SRNL invites interested companies with proven capabilities in this area of expertise to develop commercial applications for this process or product under a cooperative research and development agreement or licensing agreement. Interested companies will be requested to submit a business plan setting forth company qualifications, strategies, activities, and milestones for commercializing this invention. Qualifications should include past experience at bringing similar products to market, reasonable schedule for product launch, sufficient manufacturing capacity, established distribution networks, and evidence of sufficient financial resources for product development and launch.

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