

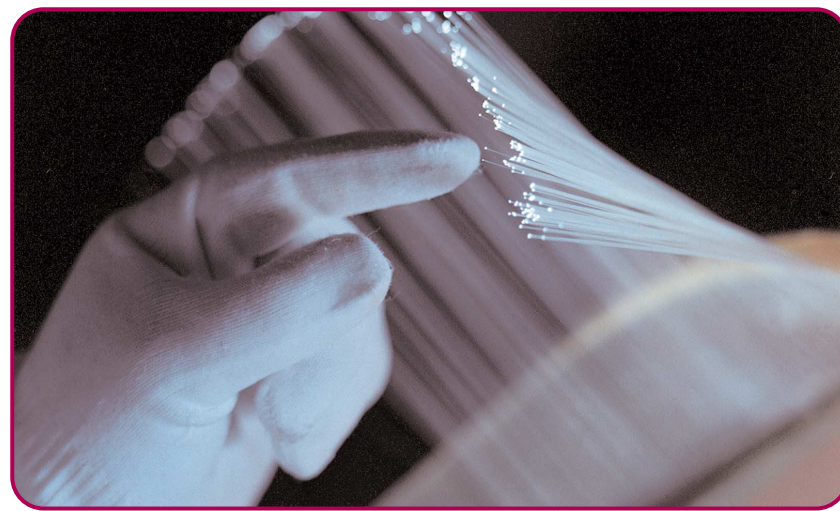
National Security

In 2001, Pacific Northwest received a major national award for defense innovation when the Christopher Columbus Foundation and *Discover Magazine* awarded researcher Dick Craig a \$100,000 fellowship in recognition of the development of the Timed Neutron Detector. Craig and a team of researchers created the detector to quickly and inexpensively locate metal and plastic landmines.

While other landmine detection systems also can locate these mines, the Timed Neutron Detector goes a step beyond. It is portable, comparatively inexpensive and easy to operate. Landmines are a significant problem worldwide—the United Nations' Landmine Database estimates that there are 110 million landmines hidden in the soils of nearly 70 countries.

At Oak Ridge, researchers are making significant contributions to the Army's Objective Force Warrior program, whose goal is to develop a high-tech soldier with 20 times the capability of today's warriors and have that soldier commissioned by 2010.

In Kazakhstan, expertise from Pacific Northwest guided one of the world's largest and most successful nonproliferation projects. More than three tons of plutonium were placed in secure storage, which should significantly reduce the risk of thefts.



Pacific Northwest's Plutonium Measurement and Analysis (PUMA) is a revolutionary radiation monitoring system that uses glass fibers to detect the presence of materials such as plutonium. This system can be used to monitor nuclear materials and has significant potential in countering the threat of nuclear terrorism.

Staff from the national laboratories that Battelle operates have also played an important role in DOE's Initiatives for Proliferation Prevention Program, which seeks to create nondefense work for former Soviet weapons scientists.

Environment

In 2001, environmental regulatory officials asked Battelle to develop a suite of tests and screens for identifying chemicals that alter or impair