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**NEWS RELEASE****NIST Award Granted to Distributed Sensor Technologies, Inc. (DST) for Civil Infrastructure Fiber Optic Sensing System Development**

*DST and Technology Partners RIO, Optiphase and UIC, Selected to Receive \$4M*

**Santa Clara, Calif. – January 12, 2009** – On January 6, 2009, NIST announced that it created nine awards under its newly formed Technology Innovation Program (TIP), for developing the next generation of structural health monitoring systems for large infrastructure elements. Distributed Sensor Technologies, Inc. (DST), of Santa Clara, Calif., has been selected as a recipient for a program entitled “Fiber Sensing System for Civil Infrastructure Health Monitoring.” DST and joint venture partners Optiphase, Inc., (Van Nuys, Calif.), Redfern Integrated Optics, Inc. (RIO), (Santa Clara, Calif.) and the University of Illinois at Chicago plan an innovative monitoring system for large public structures such as bridges, waterways or pipelines. This system substitutes a single optical fiber sensing cable for hundreds of discrete, local strain or fracture sensors. Details of the NIST TIP announcement for the Infrastructure award can be found at:

<http://tipex.nist.gov/tippb/prjbriefs/prjbrief.cfm?ProjectNumber=080019>

The funded program will enable the development of an economic method to instrument large structures for real-time, high-resolution monitoring of the public works infrastructure system for detection of cracks, large deformations, dynamic overloads and other critical structural conditions. By replacing local discrete sensors with lengths of optical fiber, the system will mitigate initial deployment costs of the discrete sensors and a variety of bandwidth and transmission problems associated with collecting data from a large number of sensors, while offering more precise information on the location and severity of faults.

The problem regarding the nation’s infrastructure has recently yielded shocking statistics, such as the 2007 Federal Highway Administration study that rated more than twenty-five percent of U.S. bridges as structurally deficient or functionally obsolete. DST is focused on large, national infrastructure projects to address such deficiencies with solutions to monitor these complex systems, which include over one million miles of water mains, 600,000 bridges and 4 million miles of public roadway.

Technology development from the DST joint venture partners includes high-performance laser sources from RIO, precision detection instrumentation from Optiphase, and civil structural monitoring expertise from the Department of Civil and Materials Engineering of the University of Illinois at Chicago.

**About RIO Inc.**

Redfern Integrated Optics, Inc. (RIO) develops and manufactures optical transmitters based on its proprietary planar external cavity laser technology (PLANEX™), which delivers unique price-performance advantages in multiple markets. RIO’s product lines include 1550nm single frequency narrow line width lasers with very low noise and long-reach 2.5-10 Gbps directly

modulated transmitters, with DWDM wavelength stability, at low cost, small size and with low power dissipation. For more information, please visit [www.rio-inc.com](http://www.rio-inc.com).

**About Optiphase Inc.**

Optiphase, Inc. is a leading provider of interferometric fiber optic sensor solutions. Products include instruments, assemblies and components serving the scientific, technical and medical community. These include interrogators, OCT Optical Modules, demodulators, fiber stretchers, interferometers, reflectometers, displacement systems and tunable converters. We also partner with system integrators (OEMs) supplying semi-custom solutions for a wide variety of industry applications such as oil & gas production, security, civil structure monitoring and OCT medical devices. For more information, please visit [www.optiphase.com](http://www.optiphase.com).

**About University of Illinois at Chicago**

UIC ranks among the nation's top 50 universities in federal research funding and is Chicago's largest university with 25,000 students, 15 colleges and the state's major public medical center. UIC's Department of Civil and Materials Engineering awards degrees through the Ph.D. level, providing an interdisciplinary educational approach that prepares students for successful careers in business, government and academia. The department's Laboratory for Smart Sensors and Non-destructive Testing (see: <http://tigger.uic.edu/depts/cme/research/ssndtl/index.html> ) conducts research to develop advanced technologies such as fiber optic sensors that monitor structural health. For more information about UIC, please visit [www.uic.edu](http://www.uic.edu)

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