



Erallo Technologies Awarded SBIR Phase II to Develop a Smart Sensor Monitoring System for Bridges

Erallo announces the award of a \$730k Phase II contract from the Army's Small Business Innovation Research (SBIR) program to develop a bridge monitoring system. The purpose of the automated sensor system will be to prevent warfighters from prolonged exposure to hostile attacks during in-depth and time consuming visual Army bridge inspections.

Littleton, MA ([PRWEB](#)) February 24, 2012 -- Erallo Technologies, Inc. (Erallo) announces the award of a \$730,000 Phase II Small Business Innovation Research (SBIR) contract from the Department of Defense and the U.S. Army Contracting Command and Bridge Engineering Team (RDECOM-TARDEC) to develop a smart sensor monitoring system for the Army's Line of Communications Bridges. The goal of this research is to develop an integrated structural-health monitoring system to identify and quantify structural damage, like micro-cracks, as well as determine the "remaining life" for safe crossings over the bridge. In the future, this technology could also be used on temporary bridges in place across the US.

The purpose of this bridge monitoring system is to prevent warfighters from prolonged exposure to hostile attacks during in-depth and time consuming visual Army bridge inspections – and to ensure the safe crossing of Army vehicles, especially heavy equipment, like the M1 Abrams tank. The objective of the system is to identify structural damage normally missed by visual inspection and to record the volume and weight of traffic passing over the bridge. The system will use real-time data captured from ruggedized strain gauge sensors and embedded, on-board computers to process the data. Mathematical models and algorithms to identify the signature of micro-cracks and extrapolate a bridge's "remaining life" are under development. The aim is to develop a sensor system that can operate as a low-cost, low-power, and low-maintenance bridge monitoring system.

The system is being developed by Erallo Technologies, which specializes in wireless sensor network for critical remote monitoring needs; and the Constructed Facilities Center at West Virginia University (CFC-WVU), known for their research and expertise in bridges, damage detection systems, and structural evaluation algorithms.

Raj Zambre, CEO/CTO of Erallo Technologies, commented: "We are very pleased to have the opportunity to further the research and development of this smart sensor monitoring system. Our ambition is that the system will provide an accurate and inexpensive way to determine the condition of bridges." Dr. Hota GangaRao, Professor and Director of WVU-CFC, commented further: "Visual inspections are time consuming, subjective, expose soldiers in hostile environments – and can't achieve a reliable determination of early crack detection at a mili-level, much less evaluate an entire bridge system for the remaining number of safe crossings. With the number of US Army controlled bridges in place, a reliable, remote monitoring system could help safeguard the lives of our warfighters."

About Erallo Technologies, Inc.

Erallo Technologies is an 8(a) certified small business specializing in wireless sensor networks for critical monitoring needs. Their solutions provide unique sensor-based processing and automated remote monitoring capabilities for real-time detection, surveillance, and reporting to meet the demands for defense and industry applications.



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