



University-Industry Collaboration Helps SST Wireless to Capitalize on the Global Market for Tire Pressure Monitoring Systems

SST Wireless of Delta, British Columbia, is driving towards success in the tire pressure monitoring systems market—a market that is expected to exceed \$2 million in the United States alone. Working together with a CMC-supported research team at the University of British Columbia, the company is providing novel microsystems to companies in the automotive supply chain around the world.

“As a small company, it would have been impossible to achieve our initial R&D milestones without a university-based research team that benefited from infrastructure provided by CMC. CMC’s highly efficient and cost-effective model adds significant value to small- to medium-sized companies that are collaborating with university researchers.”

Terry Lee
Chief Technology Officer and CEO
SST Wireless



Terry Lee, Chief Executive Officer and Chief Technology Officer of SST Wireless, values the opportunity to collaborate with a CMC-supported research team at the University of British Columbia. The Delta-based company is supplying novel tire pressure sensors to companies in global automotive supply chains.

The market for global tire pressure monitoring systems continues to grow, bolstered by legislation that aims to improve consumer safety and reduce accidents caused by tire-tread separation and other related hazards. As of September 2007, tire pressure monitoring systems are required in all new cars sold in the United States. The European Union and Far East are now considering similar legislation to address key environmental issues, such as the reduction of CO₂ emissions from vehicles.

This represents a lucrative market opportunity for SST Wireless, a BC-based startup company that specializes in wireless monitoring products for extreme environments. The company is developing wireless sensors and sensor networks for industrial, consumer and military applications utilizing radio frequency integrated circuits and radio frequency identification technologies. SST is initially focused on applications for commercial vehicles such as truck trailers, off-road trucks and bus systems. With over seven million registered truck trailers in United States, each with 18 tires, there is immediate demand for 126 million tire pressure sensors.

Under the leadership of Terry Lee, Chief Executive Officer and Chief Technology Officer, SST has developed a low-cost, robust technology platform that has the ability to relay pressure data instantaneously to the front dash of a vehicle. Mounted inside the tire, it provides an accurate reading within more than 1 PSI (pounds per square inch), helping the user to manage vehicle downtime, fuel consumption and tire costs. The team demonstrated the technology to Kal Tire of Vernon, BC, and secured the company as a venture capital partner in the tire pressure sensor market. SST’s sensor technology is already being used by the New York Metro Transit Authority, Storstockholms Lokaltrafik (Greater Stockholm Public Transport) in Sweden, and Highland Valley Copper Mining, headquartered in Vancouver, BC.

As part of its R&D, SST is managing a focused project with a CMC-supported research team at the University of British Columbia (UBC), in partnership with the Industrial Research Assistance Program of the National Research Council Canada and the Industry Liaison Office of UBC. The university research team is contributing to the development of the next-generation single-chip wireless sensor for this market using tools and technologies provided by CMC.

Terry Lee elaborates on the value of this collaboration: “Single chip development is an essential part of our technology platform for different low-power intelligent sensor applications, particularly those targeting the automotive sector. We completed our first phase of chip development by collaborating with CMC-supported researchers at UBC who have expertise in system-on-chip and MEMS technologies.” With critical support from researchers in Canadian universities and CMC, SST Wireless is well positioned to capture the growing global market for tire pressure monitoring systems. *cmc*