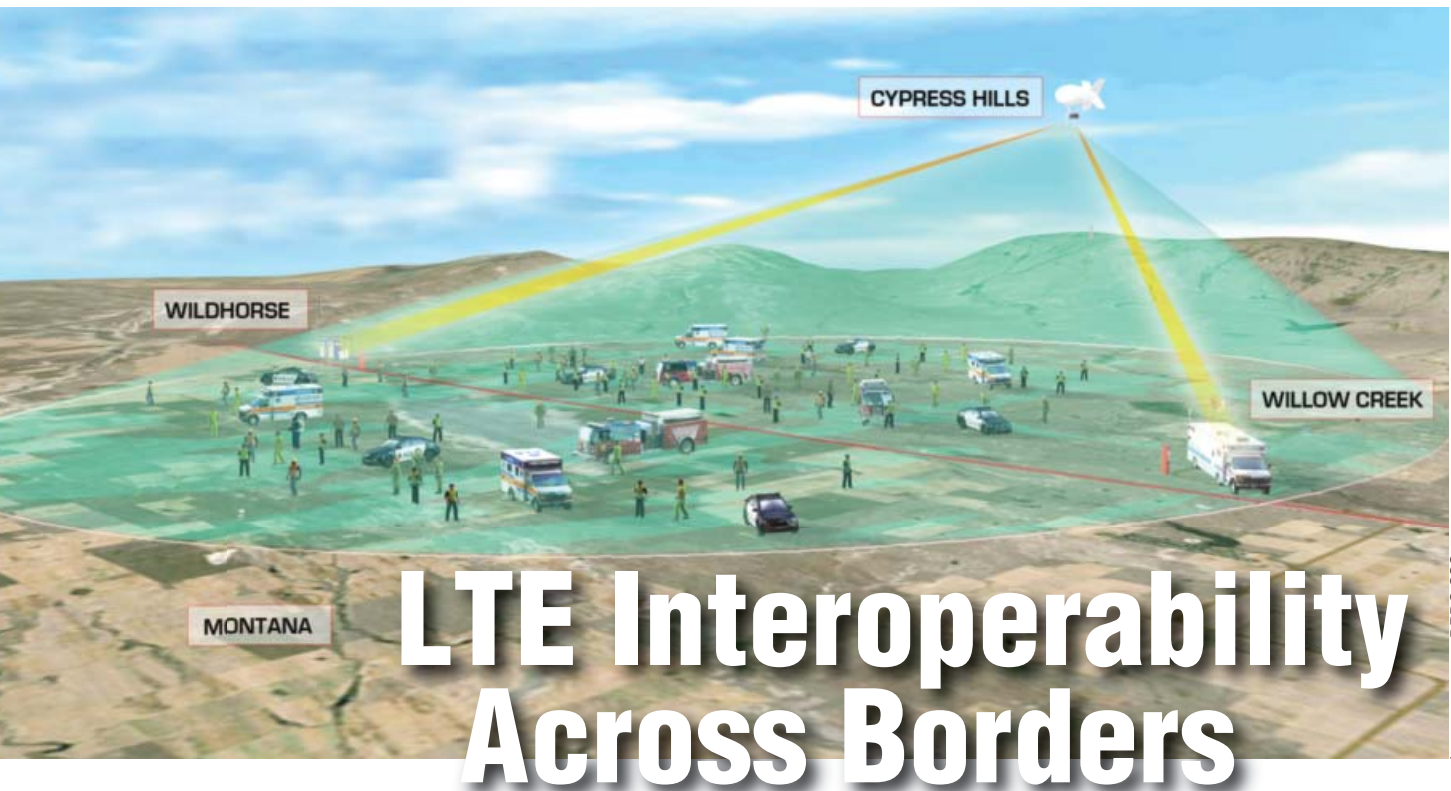


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Images courtesy DRDC CSS

## LTE Interoperability Across Borders

Some of the fundamental public-safety communications capabilities that are expected to enable safety, security and mission-effectiveness goals are not available with commercial service providers. The lacking features include the ability for a user's communications session to transition seamlessly from one service provider to another, for priority and pre-emption privileges to follow a first responder in that migration, and the capability to pool the capacity of mobile broadband networks among service providers covering an incident area and make intelligent decisions to share traffic load.

Defence Research and Development Canada's Centre for Security Science (DRDC CSS) and the U.S.

Experiments on the U.S. and Canadian border indicate LTE interoperability is possible with operator cooperation and coordination.

By Joseph Fournier and Claudio Lucente

Department of Homeland Security Science & Technology Directorate (DHS S&T) targeted these areas in experiments under a binational program to enhance both countries' resilience to natural and man-made disasters. The Canada – U.S. Enhanced Resiliency (CAUSE) series of experiments was designed to demonstrate advanced communications capabilities including Long Term Evolution (LTE) technology to first

responders and reveal research actions needed to realize those capabilities.

### Each Country's Landscape

While the U.S. nationwide public-safety broadband network (NPSBN), overseen by the First Responder Network Authority (FirstNet), is being implemented, Canada's NPSBN is in the planning stages. To ensure a high level of interoperability between both countries, LTE is the initial technology