

**DRDC – Centre for Security Sciences / TAMU**

# Canada/U.S. Resiliency Experiment V

## *Broadband Wireless Communications*

Joe Fournier / Walt Magnussen  
Main Planning Conference – May 24-25, 2017  
Bellingham, WA



**Homeland  
Security**

Science and Technology



Government  
of Canada

Gouvernement  
du Canada

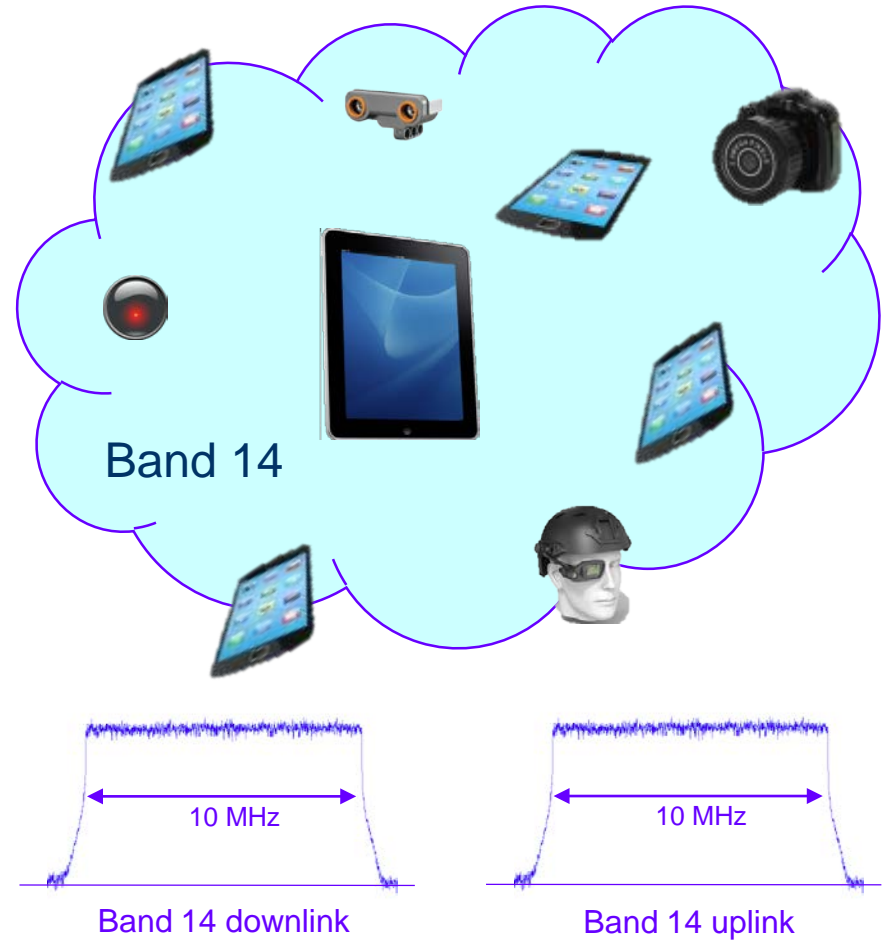
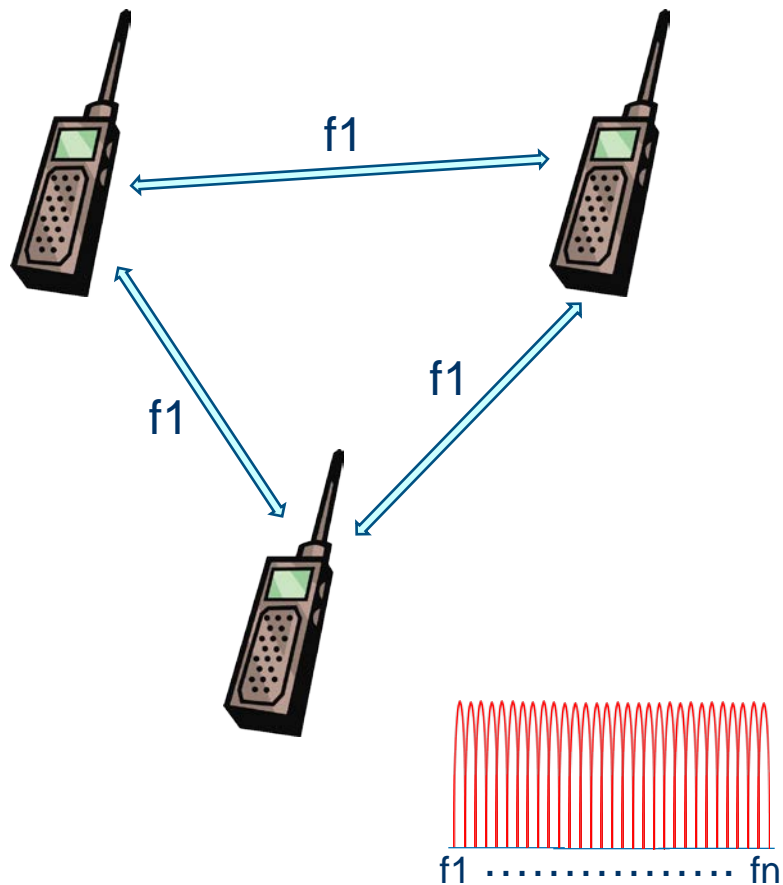
**Canada**

# 700 MHz Public Safety Broadband Network (PSBN in Canada / FirstNet in the US)

- A transformational national capability in both countries
- Key tenets
  - Interoperability
  - Affordability
  - Sustainability
  - Efficient use of spectrum
  - 365/24/7 availability

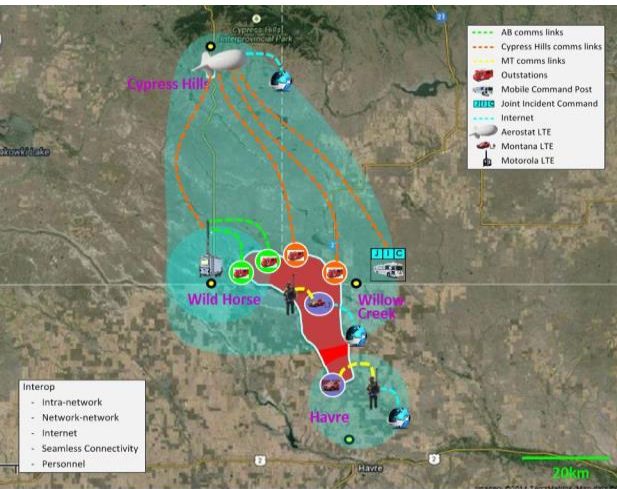
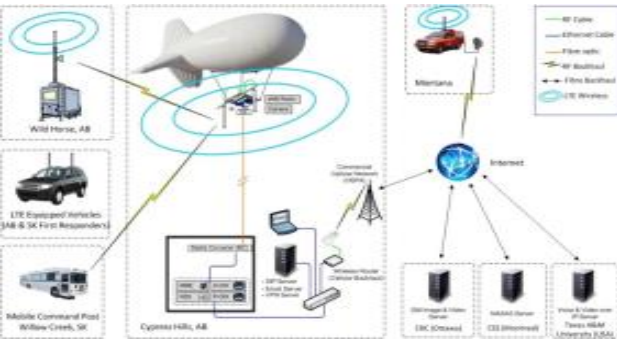


# Narrowband / Broadband



# CAUSE Series Success!

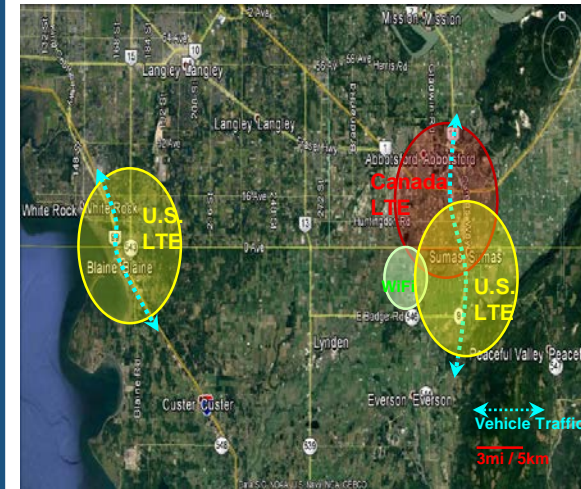
## CAUSE III



## CAUSE IV



## CAUSE V



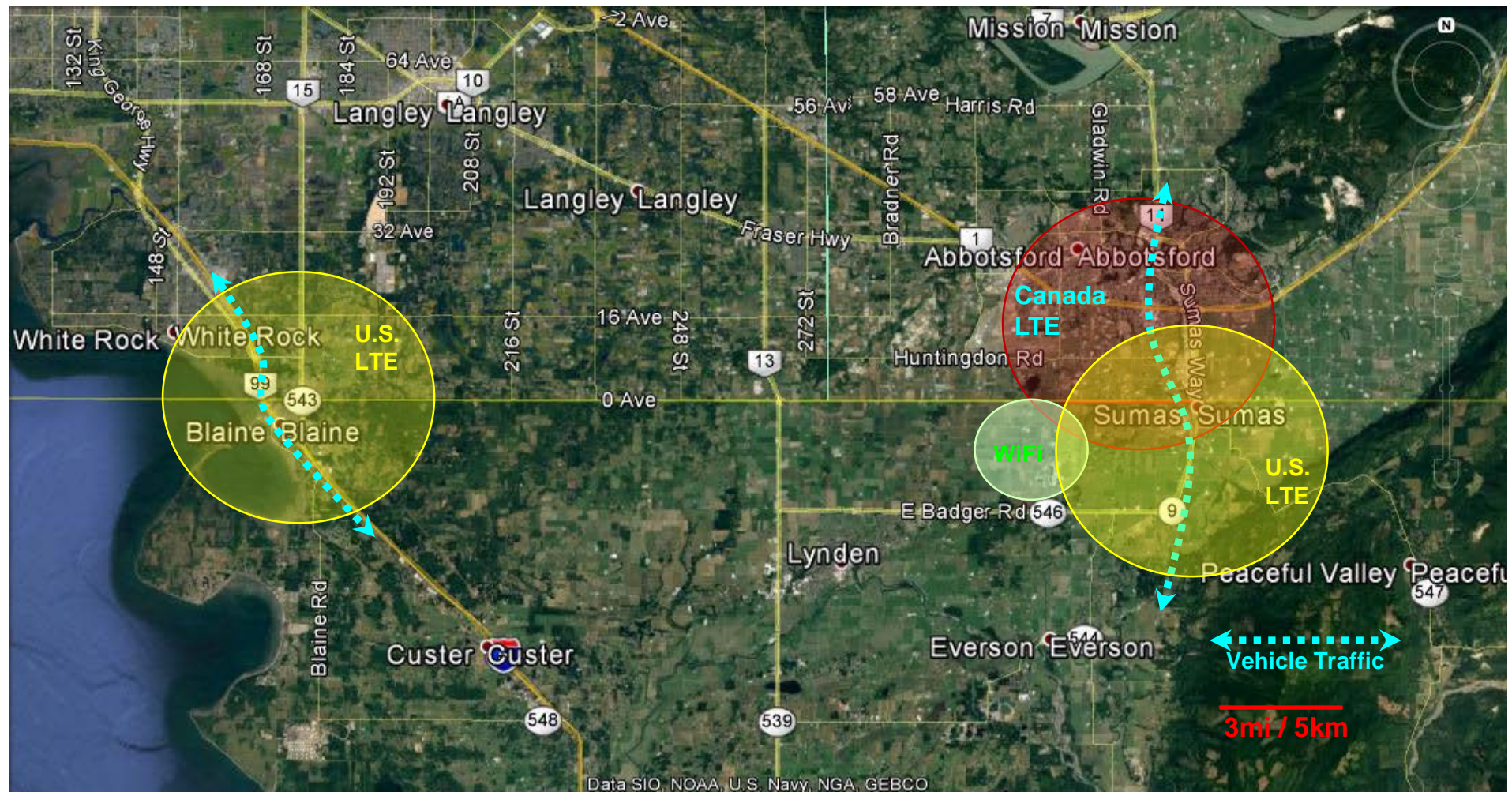
# CAUSE V –

## Broadband Wireless Enhanced Capabilities

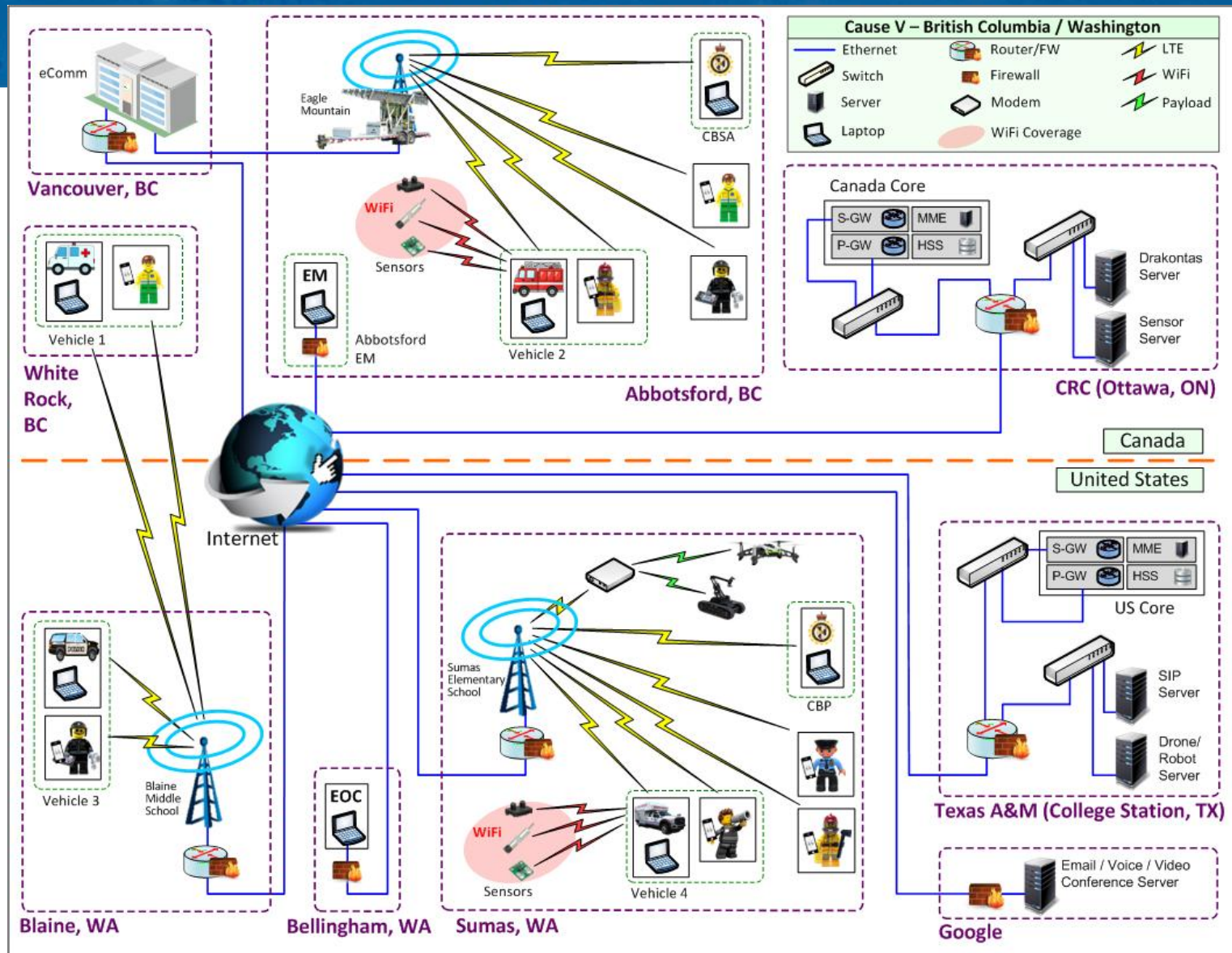
- Support wireless users in the overall scenario
- Operational Capabilities
  - GIS-based situational awareness (real-time)
  - Video conferencing/voice/email
  - Information sharing
  - Internet of Things (IoT) – sensors, drones, robots
  - Possibly PTT? A stretch though 😊
- Novel technological demonstrations
  - QoS/prioritization/preemption (QPP)
  - Congestion-based Session persistence
  - NG-911 on public safety broadband
  - Heterogeneous networking in support of IoT
- DRDC/CSS, Texas A&M, Communications Research Centre



# CAUSE V Wireless Coverage



# CAUSE V – Wireless System Diagram



# Information sharing Citizen to First Responder



NG 9-1-1 Call Taker



Emergency Caller

**NG 9-1-1**  
**ESInet**



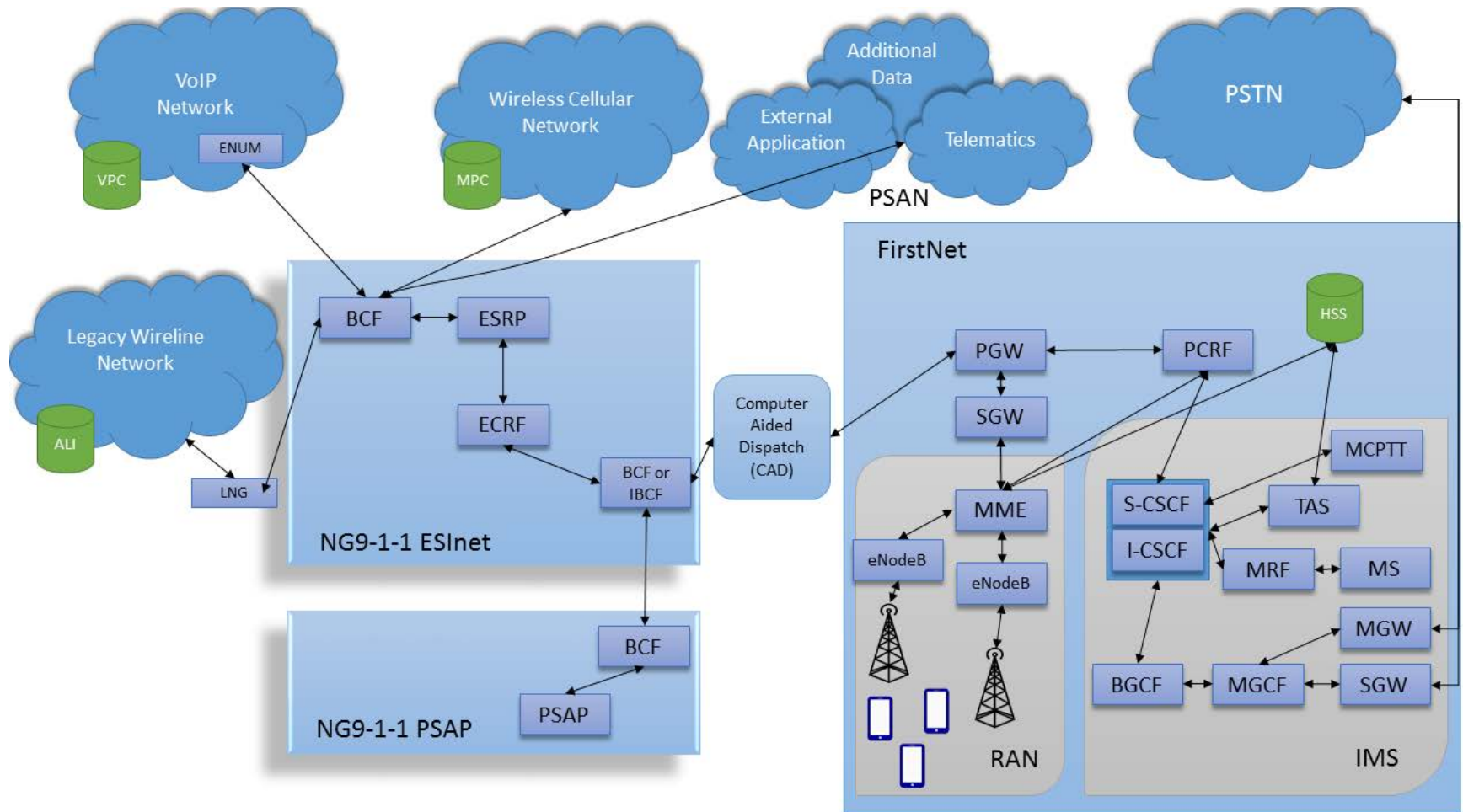
Dispatch



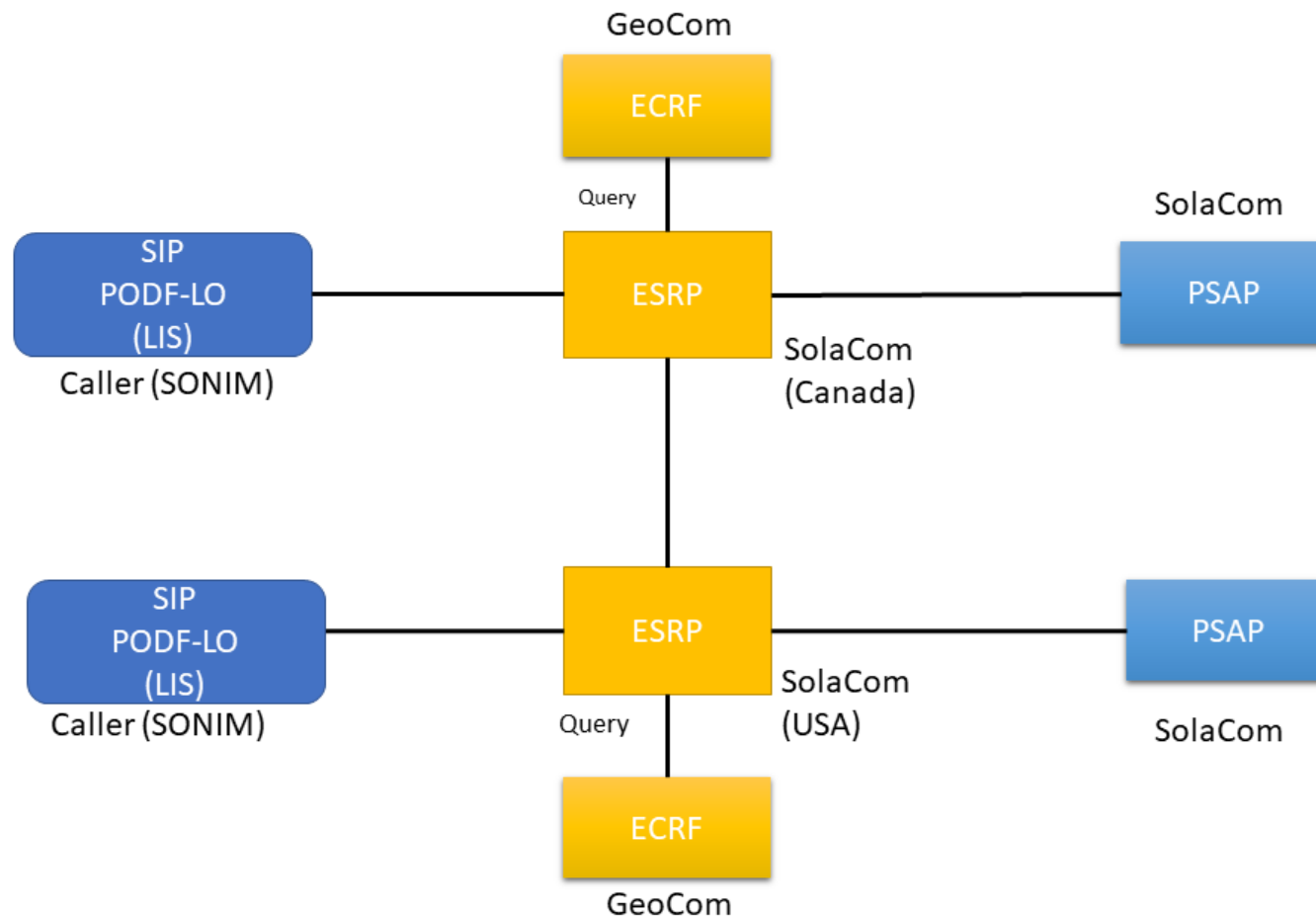
First Responder

**FirstNet**

# APCO Project 43 Architecture



# NG 9-1-1 Connecting the Two Countries



# DRDC-CSS

## Canadian Safety and Security Program



# Homeland Security

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Science and Technology